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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/684,555	10/05/2000	Harry Hvostov	ST00-S0027 (850063.581)	2174
30423	7590	03/11/2005	EXAMINER	
STMICROELECTRONICS, INC. MAIL STATION 2346 1310 ELECTRONICS DRIVE CARROLLTON, TX 75006			LEE, PHILIP C	
			ART UNIT	PAPER NUMBER
			2154	

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/684,555

Applicant(s)

HVOSTOV ET AL.

Examiner

Philip C Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/17/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1. This action is responsive to the amendment and remarks filed on October 08, 2004.
2. Claims 1-24 are presented for examination.
3. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior office action.

Claim Rejections – 35 USC 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-11 and 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pettus, U.S. Patent 5,832,219 (hereinafter Pettus) in view of Chernick et al, U.S. Patent 6,718,399 (hereinafter Chernick).
6. Pettus was cited in the last office action.

7. As per claim 1, Pettus taught the invention substantially as claimed for managing client-server communications in a network device (col. 5, lines 1-4), comprising:

providing the network device with server components and configuring the server

components to implement a functionality set (fig. 9; col. 12, lines 2-9; col. 20, lines 35-39);

providing the server components with an interface method (col. 12, lines 2-16);

providing a client component with references to the interface method (col. 9, lines 49-58; col. 12, lines 34-60); and

processing client component requests by invoking the interface method on the server component via the references to the interface method (col. 9, lines 49-58; col. 12, lines 10-16).

8. Pettus did not teach communication via a message queue. Chernick taught a similar system comprising:

sending client component requests to server components via a message queue (col. 1, lines 54-60; col. 4, line 43-col. 5, line 21).

9. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Pettus and Chernick because Chernick's system of communication via a message queue would increase the data integrity of Pettus's system by avoiding a message to be sent to a server object more than once, message for a busy object may be held in a queue and retrieved by the destination object. Thus the first version of the message

is therefore the only one that can be processed, substantially enhancing data integrity (col. 3, lines 4-15).

10. As per claim 5, Pettus taught the invention substantially as claimed for network device subsystem operations, comprising:

implementing a first component in the network device, the first component having functions and function pointers corresponding to the functions (fig. 9; col. 12, lines 2-9; col. 20, lines 35-39);

implementing a second component in the network device, the second component having references to the function pointers in the first component (col. 12, lines 34-60);

receiving a request from the second component for a function in the first component via a corresponding reference to the function pointer (col. 9, lines 49-58; col. 12, lines 10-16); and

generating a response from the first component to provide the requested function to the second component (col. 9, lines 49-58; col. 12, lines 10-20).

11. Pettus did not teach communication via a message queue. Chernick taught a similar system wherein client component sends requests to server components via a message queue (col. 1, lines 54-60; col. 4, line 43-col. 5, line 21).

12. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Pettus and Chernick because Chernick's system of communication via a message queue would increase the data integrity of Pettus's system by avoiding a message to be sent to a server object more than once, message for a busy object may be held in a queue and retrieved by the destination object. Thus the first version of the message is therefore the only one that can be processed, substantially enhancing data integrity (col. 3, lines 4-15).

13. As per claim 15, Pettus taught the invention substantially as claimed comprising:
a server component configured with a plurality of functions and function pointers for the plurality of functions (col. 11, lines 64-col. 12, lines 9; col. 20, lines 35-39);
a client component configured with references to the function pointers (col. 12, lines 34-60); and
an interface manager configured to receive requests for functions from the client component and to invoke the requested functions from the server component via the function pointers (col. 11, lines 64-col. 12, lines 20).

14. Pettus did not teach communication via a message queue. Chernick taught a similar system wherein client component sends requests to server components via a message queue (col. 1, lines 54-60; col. 4, line 43-col. 5, line 21).

15. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Pettus and Chernick because Chernick's system of communication via a message queue would increase the data integrity of Pettus's system by avoiding a message to be sent to a server object more than once, message for a busy object may be held in a queue and retrieved by the destination object. Thus the first version of the message is therefore the only one that can be processed, substantially enhancing data integrity (col. 3, lines 4-15).

16. As per claims 2, 6 and 18, Pettus and Chernick taught the invention substantially as claimed in claims 1, 5 and 15 above. Pettus further taught wherein configuring server components with functionality and providing the interface method comprises providing a table of pointers for the functions (fig. 9; col. 12, lines 2-9; col. 20, lines 35-39).

17. As per claims 3, 7-8 and 19, Pettus and Chernick taught the invention substantially as claimed in claims 2, 6 and 18 above. Pettus further taught wherein providing a client component with references to the interface method comprising providing references to the table of pointers (col. 12, lines 2-44; col. 13, lines 11-18).

18. As per claims 4, 9 and 16-17, Pettus and Chernick taught the invention substantially as claimed in claims 3, 8 and 15 above. Pettus further taught wherein processing client component requests comprises generating requests from the client component for functions from the server

components by referencing the table of pointers for the requested functions and generating responses from the server component to provide the functions requested through the table of pointers (col. 9, lines 49-58; col. 11, lines 64-col.12, lines 20; col.12, lines 34-44).

19. As per claims 10 and 20, Pettus taught the invention substantially as claimed for a data-over-cable network having a plurality of network stations (col. 1, lines 30-43), comprising:

providing a plurality of components in the network station, each of the plurality of components having a functionality set and a table of pointers for the functionality set (col. 11, lines 64-col. 12, lines 9; col. 20, lines 35-39);

providing a station manager having references to the tables of pointers in the plurality of components (col. 12, lines 34-60; col. 13, lines 11-18);

providing an interface manager for communication with the plurality of components and the station manager (fig. 9; col. 9, lines 49-58; col. 12, lines 10-20); and

processing station manager requests for functionality from the plurality of components through the interface manager via the references to the tables of pointers (col. 11, lines 64-col. 12, lines 16).

20. Pettus did not teach communication via a message queue. Chernick taught a similar system wherein client component sends requests to server components via a message queue (col. 1, lines 54-60; col. 4, line 43-col. 5, line 21).

21. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Pettus and Chernick because Chernick's system of communication via a message queue would increase the data integrity of Pettus's system by avoiding a message to be sent to a server object more than once, message for a busy object may be held in a queue and retrieved by the destination object. Thus the first version of the message is therefore the only one that can be processed, substantially enhancing data integrity (col. 3, lines 4-15).

22. As per claims 11 and 21, Pettus and Chernick taught the invention substantially as claimed in claims 10 and 20 above. Pettus further taught wherein processing station manager requests comprising:

generating requests at the station manager for functionality through the references tables of pointers and sending the requests for functionality to the interface manager (col. 13, lines 11-19); and

receiving the requests for functionality at the interface manager and invoking the functionality from the requested functionality sets via the table of pointers (col. 11, lines 64-col. 12, lines 16).

23. Claims 14 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pettus and Chernick in view of "Official Notice".

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24. As per claims 14 and 24, Pettus and Chernick taught the invention substantially as claimed in claims 11 and 20 above. Pettus and Chernick did not specifically teach storing data referenced by the pointers are stored in a shared memory area. However, Pettus taught the network station has unit including a ROM, a RAM and a secondary storage unit (fig. 5; col. col. 6, lines 64-col. 7, lines 6). "Official Notice" is taken that the concept of storing data in a shared memory area is well known and accepted in the art. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to store data referenced by the pointers in a shared memory area such as RAM because by doing so would allowed shared access to the data referenced by the pointers to satisfy the requests for functionality.

25. Claims 12 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pettus and Chernick in view of Lomet et al, U.S. Patent 6,182,086 (hereinafter Lomet).

26. Lomet was cited in the last office action.

27. As per claims 12 and 22, Pettus and Chernick taught the invention substantially as claimed in claims 11 and 20 above. Pettus and Chernick did not specifically detailing the order of processing the requests. Lomet taught wherein the requests for functionality are processed serially by the interface manager (col. 8, lines 34-40).

28. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Pettus, Chernick and Lomet because Lomet's

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means of processing would increased the reliability of Pettus's and Chernick's systems by avoiding unpredictable results cause by reversing the serialization order of the requests (col. 8, lines 34-39).

29. Claims 13 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pettus, Chernick in view of Harchol-Balter et al, U.S. Patent 6,223,205 (hereinafter Harchol-Balter).

30. Harchol-Balter was cited in the last office action.

31. As per claims 13 and 23, Pettus and Chernick taught the invention substantially as claimed in claims 11 and 20 above. Pettus and Chernick did not specifically detailing the order of processing the requests. Harchol-Balter taught wherein the requests for functionality are processed by the interface manager on a first-come first-served basis (col. 11, lines 46-52).

32. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Pettus, Chernick and Harchol-Balter because Harchol-Balter's means of processing would increased the fairness of Pettus's and Chernick's systems by allowing interface manager to process the requests from plurality of processors for functionality in the order which the requests are received.

33. Applicant's arguments with respect to claims 1, 5, 10-13 and 20-23, filed 10/08/04, have been fully considered but are not deemed to be persuasive and are moot in view of the new grounds of rejection.

34. In the remark applicant argued that

(1) Pettus fail to teach communication via a message queue as recited in claims 1, 5, 10 and 15.

(2) Pettus does not teach a plurality of components in a network station and the invention are directed to multiple components residing on one host.

(3) Lomet's teaching does not address the problem solved by the present invention.

(4) Harchol-Balter's teaching does not address the problem solved by the present invention.

35. In respond to point (1), Pettus did not teach communication via a message queue.

Chernick taught a similar system wherein client component sends requests to server components via a message queue (col. 1, lines 54-60; col. 4, line 43-col. 5, line 21).

36. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Pettus and Chernick because Chernick's system of communication via a message queue would increase the data integrity of Pettus's system by

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avoiding a message to be sent to a server object more than once, message for a busy object may be held in a queue and retrieved by the destination object. Thus the first version of the message is therefore the only one that can be processed, substantially enhancing data integrity (col. 3, lines 4-15).

37. In response to point (2), as per claims 11 and 21, Pettus taught wherein processing station manager requests comprising:

generating requests at the station manager for functionality through the references tables of pointers and sending the requests for functionality to the interface manager (col. 13, lines 11-19); and

receiving the requests for functionality at the interface manager and invoking the functionality from the requested functionality sets via the table of pointers (col. 11, lines 64-col. 12, lines 16).

38. Pettus's invention is directed to a plurality of components in a network station (i.e. fig. 7, components in a server node) (col. 12, lines 4-20). Pettus further taught the request can be generated by local client object and serviced by the local service object (i.e. objects can be generated and serviced by objects locally or within a server node) (col. 5, lines 9-12).

39. In response to points (3) and (4), In response to applicant's argument that Lomet and Harchol-Balter does not address the problem solved by the present invention, the fact that applicant has recognized another advantage which would flow naturally from following the

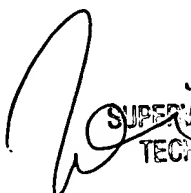
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suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).]

40. A shortened statutory period for reply to this Office action is set to expire **THREE MONTHS** from the mailing date of this action.

41. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip C Lee whose telephone number is (571)272-3967. The examiner can normally be reached on 8 AM TO 5:30 PM Monday to Thursday and every other Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571)272-3964. The fax phone number for the organization where this application or proceeding is assigned is (703)746-7239. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)350-6121.

P.L.

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